

REMARKS

This is intended as a full and complete response to the Office Action dated January 27, 2005, having a shortened statutory period for response set to expire on April 27, 2005. Please reconsider the claims pending in the application for reasons discussed below.

Information Disclosure Statement

Applicants request acknowledgement of consideration of the two references cited in the information disclosure statement having a mail room date of December 13, 2004. Further, Applicants request consideration of the information disclosure statement filed herewith.

Claims Rejections - 35 U.S.C. § 112

Claims 18 and 19 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In response, Applicants canceled these claims without prejudice.

Claim Rejections - 35 U.S.C. § 102

Claims 1-5, 8-11, 15, 16, 19 and 24-28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,113,290 to *Miida*. In response, Applicants respectfully traverse the rejection. Further, Applicants canceled claims 1, 9, 10, 15, 16 and 19 without prejudice.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Further, the elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

In this case, *Miida* does not disclose the elements arranged as required by the claims. Specifically, *Miida* fails to disclose thread portions where “at least one flank of the male thread portion abuts a corresponding flank of the female thread portion in a central region between end regions of the male and female thread portions, and remaining corresponding flanks of the thread portions in the end regions define gaps therebetween,” as recited in claim 2. In contrast, *Miida* teaches a first end of male and female threads where all surfaces of the threads are engaged and a second end of the threads where gaps are formed between certain surfaces of the threads while surfaces defining mating flanks of the threads remain engaged. Due to this arrangement, both end regions of the threads in *Miida* have flanks of the male and female threads in engagement without providing gaps between the flanks. For the foregoing reasons, *Miida* cannot anticipate claim 2 and claims 3-5, 8, 11 and 24-28 dependent thereon. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of these claims.

Claims 1-5, 8-19, 21 and 23-28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,158,785 to *Beaulier et al.* In response, Applicants respectfully traverse the rejection. Further, Applicants canceled claims 1, 9, 10, 15, 16, 18 and 19 without prejudice.

Beaulier et al. does not disclose the elements arranged as required by the claims. Specifically, *Beaulier et al.* fails to disclose thread portions where “at least one flank of the male thread portion abuts a corresponding flank of the female thread portion in a central region between end regions of the male and female thread portions, and remaining corresponding flanks of the thread portions in the end regions define gaps therebetween,” as recited in claim 2. To the contrary, *Beaulier et al.* teaches male and female threads having a first thread disposed between a second thread such that the first and second threads alternate along the length of the male and female threads to provide different clearances between the male and female threads at each of the first and second threads. This alternating pattern of clearances due to the first and second threads of the male and female threads in *Beaulier et al.* does not teach differentiation of a central region from end regions of the male and female thread portions. For the foregoing reasons, *Beaulier et al.* cannot anticipate claim 2 and claims 3-5, 8, 11-14, 17,

21 and 23-28 dependent thereon. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of these claims.

Claim Rejections - 35 U.S.C. § 103

Claims 6, 7, 20 and 29-32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,113,290 to *Miida* in view of WIPO application WO02/01102 and applicant's admitted prior art in the specification on pages 1-2. In response, Applicants respectfully traverse the rejection.

Combinations of references applied under § 103 are valid only when there is some teaching or suggestion in one or more of those references to combine the elements to do that which a later applicant claims as his invention. See, Arkie Lures, Inc. v. Gene Larew Tackle, Inc., 43 U.S.P.Q.2d 1294, 1297 (Fed. Cir. 1997). In order to establish a prima facie case of obviousness based on the prior art, the Examiner must show some "objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." In re Fritch, 972 F.2d 1260, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." Id. at 1783-84; MPEP § 2143.01. The factual inquiry whether to combine references must be based on objective evidence of record, otherwise the proposed motivation is improper hindsight. See, In re Lee, 277 F.3d 1338, 1344 (Fed. Cir., 2002). This factual question of motivation is material to patentability and cannot be resolved on subjective belief and unknown authority. Id. This absence of a suggestion to combine the references is dispositive in an obviousness determination. Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579 (Fed. Cir. 1997).

While the Examiner states that it would have been obvious to expand the coupling of *Miida* as needed as taught by the WIPO application and applicants' disclosure in order to provide a more secure coupling, there is no suggestion in either of the references that expanding the coupling of *Miida* would actually provide a more secure connection. As the Examiner points out, the *Miida* coupling is not stated to be

expanded. Accordingly, neither reference teaches gaps that accommodate differential expansion at the coupling or that at least partially close upon expansion. Further, it is only Applicants' present disclosure that provides motivation for the invention as claimed. For the foregoing reasons, Applicants submit that it would not have been obvious to one of ordinary skill in the art to accommodate relative axial movement between corresponding flanks with gaps between flanks of the threads as claimed upon expanding the claimed coupling. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of the claims.

New Claims

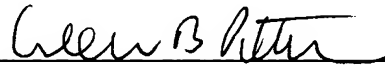
Applicants submit that claim 33 and 34 are patentable over the cited references based at least on the traversal presented above regarding claim 29 from which this claim depends. Additionally, Applicants submit that claims 35-38 are patentable since the cited references fail to teach show or suggest male and female thread portions having flanks and being movable radially outward, wherein when the male and female thread portions are engaged, at least one flank of the male thread portion abuts a corresponding flank of the female thread portion, and remaining corresponding flanks of the thread portions define gaps therebetween such that at least some of the gaps at least partially close when the thread portions move radially outward. Accordingly, Applicants respectfully request allowance of these claims.

Conclusion

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicants' disclosure than the primary references cited in the office action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed. Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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